

# FXJ series



# Japanese Quality

Japan, a country of old traditions, has proven its high technical performances in many different ways. Already many years ago Japanese electronic equipment contributed greatly to the possibility to reach the moon and other planets. In almost every computer, telephone or any other kind of electronic equipment we can find some Japanese components. In the car industry Japanese engineers have achieved high performances in order to produce more efficient and economical cars. Car tests in different countries have often concluded that Japanese cars are the most reliable and with a minimum of maintenance cost. Also Furukawa is one of those traditional concerns that could show continuous growth through their ongoing product improvement and development. Everything started in 1875, when Furukawa opened their Kusakura Copper Mine. The mining always required new and specific solutions to improve our production. For this reason Furukawa started in 1900 to produce their own mining equipment, which led to higher production levels at the mine.

With this step Furukawa unintentionally created the base for a new, high technology concern. The better results with their custom-made machinery soon created a demand for similar machines in other mines. To be able to fulfil these requirements, Furukawa started to separate their activities into different divisions.

In 1918 Furukawa Mining Co. Ltd was founded and in 1920 Furukawa Electric Co. Ltd. Later in 1961 the start of Furukawa Rock Drill Co. Ltd was an answer to the demand to be able to sell worldwide the machines, that initially were meant only for their own use. In 1971 Furukawa established a new factory in Yoshii for the production of crawler drills and demolition equipment.

The demand for those products was so large, that in 1976 a second production unit was established in Takasaki.

Since then, from these two factories, more than 150.000 hydraulic breakers have been delivered all over the world.

In the meantime the Furukawa Rock Drill division has built an international sales and service network, which secures an optimum after sales service for all the equipment. We take our slogan "WHERE EXPERIENCE COUNTS" as serious as other Japanese traditions and hope you will approach us with your specific demands.





# FXJ SERIES

## Next Generation

FRD's newest line of hydraulic breakers for excavators represents the latest in design technology. With multiple patented enhancements, the FXJ series improve day-to-day performance, offering less maintenance and downtime, smoother operation, superior strength and the highest level of reliability. A wider hydraulic flow range allows for use on a broad range of carriers reducing inventory while increasing utilization.

**DURABLE & RELIABLE**

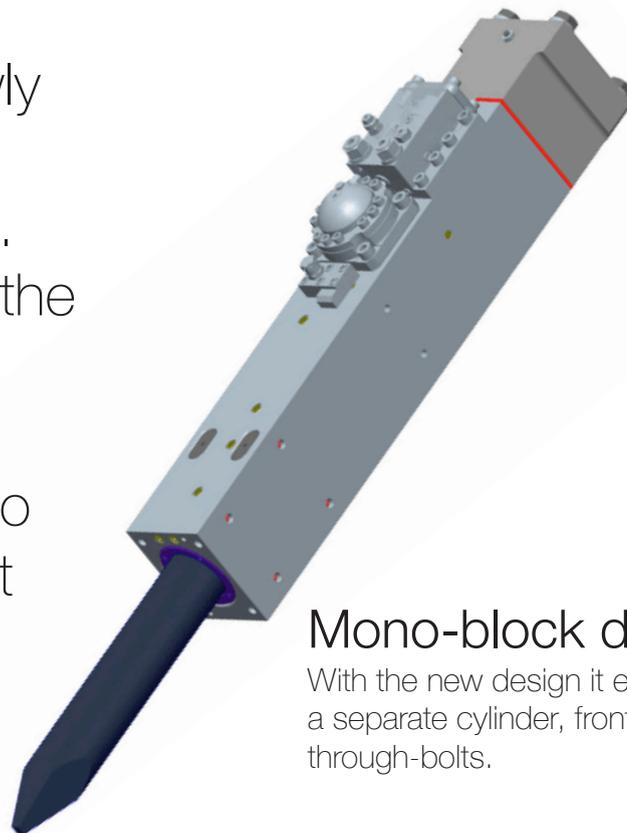






# Innovative thinking

The introduction of the newly designed FRD hydraulic breaker is a world premiere. The FXJ is one of a kind in the market, thanks to the new mono-block design. With this new design there are no through bolts needed and it ensures more power and resistance.



## Mono-block design

With the new design it eliminates a separate cylinder, fronthead and through-bolts.

# NEW DESIGN







Which FXJ suits you?



FXJ MODELS

# The exclusivity you need

## **GREAT BREAKING POWER**

The use of high quality materials and the highest quality production process results in a breaker body with less weight and higher output/performance. The impact energy is higher than ever.

## **OPERATOR FRIENDLY**

With the new slim design the FXJ has a better accesability in demolition and quarry pit. It provides high efficiency in trench work. In addition to its slim design, there is a newly designed top damer which reduces the noise and vibration.

## **IMPROVED DURABILITY**

The use of the best quality materials and the highest quality standard in production creates a product that will work longer and is more efficient. Thank to the new floating rod seal, it minimizes dust intake and result in a extend life time.

## **EASY SERVICE**

To ease the service FRD developed the mono-block cylinder which reduced the parts. With this unique construction, there are no through bolts needed. With the new rod pin design and other improvements of the parts, the lifetime is longer and easy to replace.

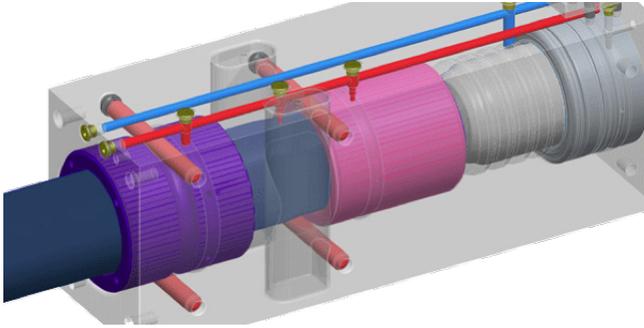
## **LOWEST LIFETIME COST**

High quality materials give a longer lifetime to each part, which drastically reduce the total maintenance cost. Over long periods the advantages of less downtime and fewer parts to replace results in a cost per year, which are the lowest in the market.



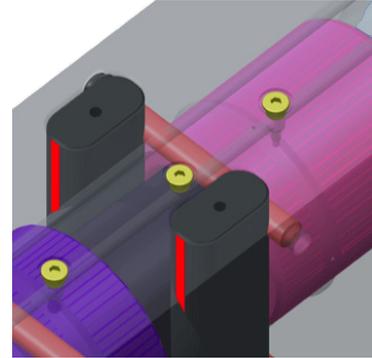


# Technology that makes a difference



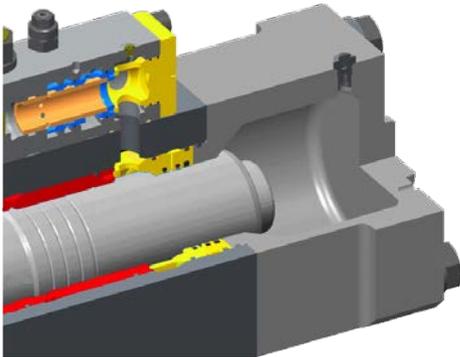
## New greasing system

Advanced greasing system that evenly distributes grease to thrust bushing, front bushing and rod pins



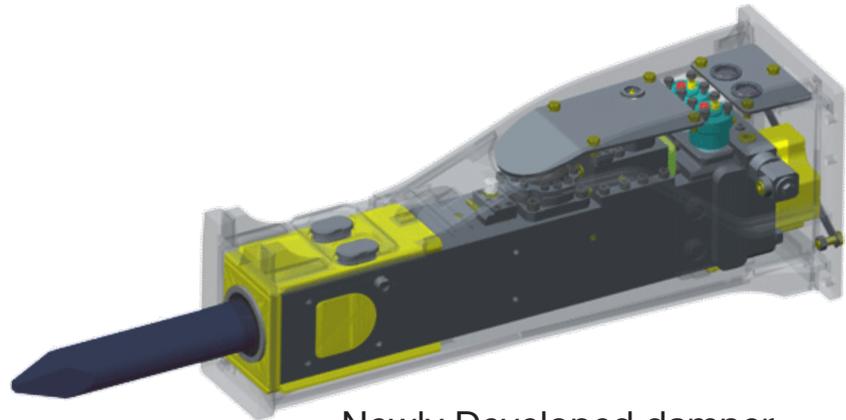
## Newly developed rod-pin

Load is decreased by the long Rod-Pin, which enlarge the supporting area



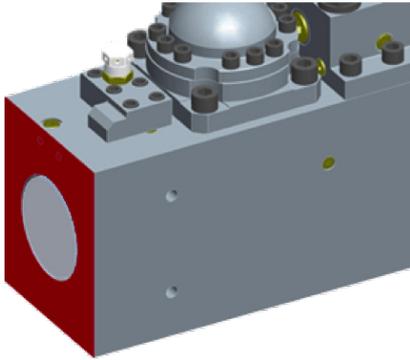
## New valve design

Low resistance reduces hydraulic fluid temperatures which increases the efficiency



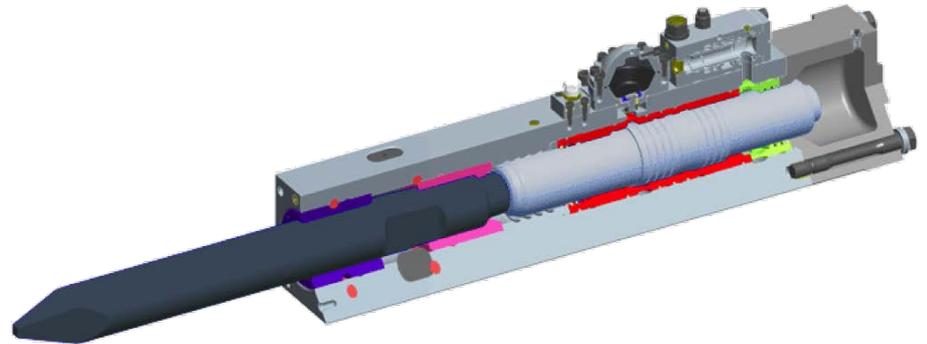
## Newly Developed damper

Large volume top damper absorbs vertical movements and reduces the noise level



### Slim body design

Rectangular body design for superior strength



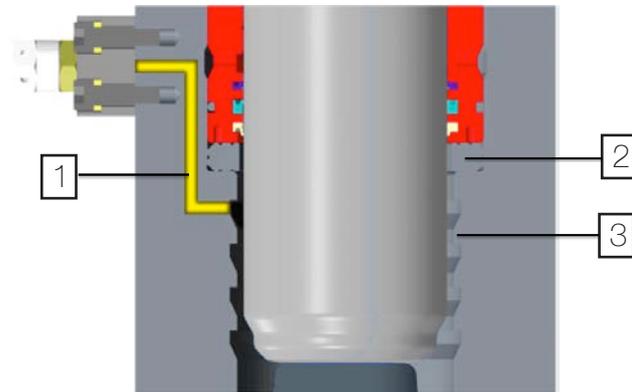
### No through bolts

Reduced maintenance and failure because the removal of through bolts. It also ensures an increased power/weight ratio.



### Redesigned piston

Increased contact area to the impact surface of the rod



### Dust control system

3-point Patent Pending dust intake prevention system.

1: Clean air intake system

2: Replaceable Dust Wall

3: Alligator tooth design "Dust Trap" minimizes entry of dust

# Ready for the toughest jobs



Overburden removal, bench,  
road & ramp levelling



Boulder reduction in rock  
piles



Lightweight concrete,  
standard concrete



Steel-reinforced concrete,  
pre-stressed concrete,  
fibre-reinforced concrete



Asphalt, concrete, composite  
surfaces



Trenching, pit building, ground  
excavation

# FXJ175



Tunnel driving, roof, face & rib scaling, floor levelling



Boulder reduction in slag heaps

### Only with FRD special equipment

Roof clearing

Bench levelling

Removing encrustations

Breaking out ladles and molds

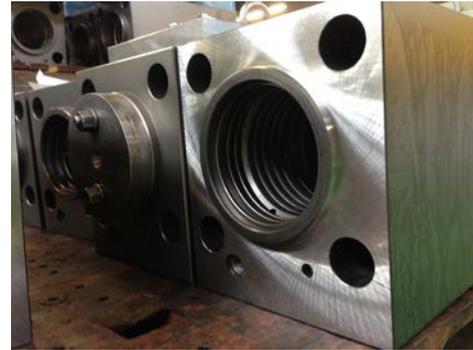
Underwater Demolition, Deepening shipping channels



# FXJ275

# More than just a breaker

The FXJ175 is a mid-size hammer designed for use on excavators and pedestal booms. Operators appreciate performance features such as a stroke control, which lengthens or shortens the stroke and adapts the impact energy to the material being broken. Internal maintenance is greatly reduced due to the mono-block cylinder and less parts. The FXJ175 is also designed to accommodate automatic grease systems for quick daily maintenance.



# FXJ175



Specifications		FXJ175	
Operating weight, <sup>1)</sup> FXJ	kg		1015
Height with rod,	mm		2043
Operating pressure	min MPa		16 18
Oil flow	min l/min		100 160
Impact rate	min bpm		450 900
Impact energy (Joules)			3610
Rod diameter Ø	mm		120
Effective length rod	mm		620
Weight rod	kg		81
Hose inner dia Ø Press Return	mm		19
Base machine weight	ton		12 - 21

<sup>1)</sup> Operating weight with top bracket. FXJ Silent Version = Sound and vibration damping

Specifications subject to change without notice

# EXCAVATOR SIZE 12-21<sup>T</sup>

# Where two become one

Why need two if you can have one?

The FXJ275 will cover a wide range of excavators and leaves his competitors behind. With his slim body design there will be no job that is too demanding. The FXJ is at home, performing with reliable ease on a daily basis. All the features of the FXJ series are present in this breaker; Monoblock design, dust control system, newly developed rod-pin redesigned piston and a new valve design resistance.

# FXJ275





Specifications		FXJ275	
Operating weight, <sup>1)</sup> FXJ	kg		1775
Height with rod,	mm		2468
Operating pressure	min MPa		16 18
Oil flow	min l/min		145 220
Impact rate	min bpm		350 620
Impact energy (Joules)			5120
Rod diameter Ø	mm		140
Effective length rod	mm		680
Weight rod	kg		143
Hose inner dia Ø Press Return	mm		25
Base machine weight	ton		18 - 30

<sup>1)</sup> Operating weight with top bracket. FXJ Silent Version = Sound and vibration damping

Specifications subject to change without notice

# EXCAVATOR SIZE 18-30<sup>T</sup>





# Ready for the toughest jobs



Primary rock breaking



Secondary breaking



Tunnel driving, Roof, Face & Rib scaling, Floor levelling



Steel-reinforced concrete,  
pre-stressed concrete,  
fibre-reinforced concrete



Asphalt, concrete, composite  
surfaces



Trenching, pit building, ground  
excavation

# FXJ375



Canal deepening & extension



Ground levelling



Dock deepening & extension



Foundation pile driving



**FXJ475**

# In the center of attention

Designed for excavators in the 25 to 42 ton range, the FXJ375 is a hard hitting breaker that has no rivals. With years of research behind each hammer, it's no surprise the FXJ outperforms the competition. It starts from the inside out with a patented mono-block cylinder. We don't stop there, a larger piston diameter and increased back head pressure improves the breaker impact performance. An optional hi-lo speed control actuated from the cab matches the breaker and excavator to the application.

# FXJ375





Specifications		FXJ375
Operating weight, <sup>1)</sup> FXJ	kg	2525
Height with rod,	mm	2715
Operating pressure	min MPa	16 18
Oil flow	min l/min	170 260
Impact rate	min bpm	350 450/550
Impact energy (Joules)		7310
Rod diameter Ø	mm	140
Effective length rod	mm	715
Weight rod	kg	167
Hose inner dia Ø Press Return	mm	25
Base machine weight	ton	25 - 42

<sup>1)</sup> Operating weight with top bracket. FXJ Silent Version = Sound and vibration damping

Specifications subject to change without notice

# EXCAVATOR SIZE 25-42<sup>T</sup>

# A piece of high-tech elegance

Excavators in the 33-55 ton class are the perfect match for this demolition machine. Whether you're breaking blue granite in Scandinavia or reducing oversize boulders in Spain, the FXJ475 performs its job quietly and with ease. The unique one-piece enclosure and damper system reduces noise levels for use in noise sensitive environments. A higher back head pressure and larger piston diameter increases impact performance. We made greasing easy with a unique lubrication system for the front section and front bushings which improves the service and lifetime of the rod.

# FXJ475





Specifications		FXJ475
Operating weight, <sup>1)</sup> FXJ	kg	3205
Height with rod,	mm	2892
Operating pressure	min MPa	16
		18
Oil flow	min l/min	200
		300
Impact rate	min bpm	250
		450
Impact energy (Joules)		9620
Rod diameter Ø	mm	170
Effective length rod	mm	720
Weight rod	kg	229
Hose inner dia Ø Press Return	mm	32
Base machine weight	ton	33 - 55

<sup>1)</sup> Operating weight with top bracket. FXJ Silent Version = Sound and vibration damping

Specifications subject to change without notice

# EXCAVATOR SIZE 33-55<sup>T</sup>

# Make your breaker complete



## B Pro monitor

- It will check the proper operating pressure with LED indicator.
- There will be a warning over 30 second continuous impact operation per one (1) time.
- In case of reaching the service interval, the LED light indicator advises for periodical maintenance.
- It memorize overloading, operation hour and other defects .
- Extended warranty in combination with maintenance program and this monitoring system is under contemplation.



## Sencio Lubrico

- One unit design.(Additional piping unnecessary)
- One greasing per one operation. Single-shot type
- Greasing amount is adjustable.
- Only two piping required. One pressured oil from valve housing and another for greasing,
- Easy installation.

# OPTIONS



## Armour Plates

Extra protection against wear  
in trenching and quarry works



## Swivel

Extending the life of the hoses

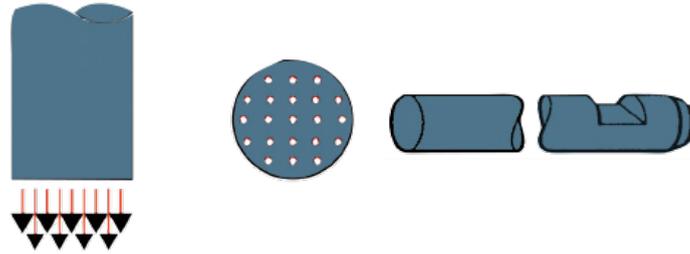


Type of rods

Shape

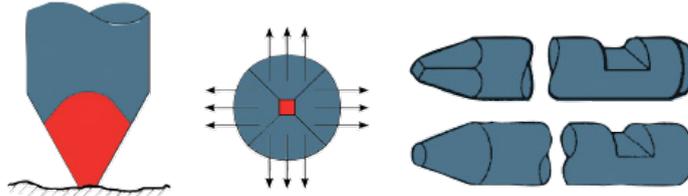
Major applications

Flat rod



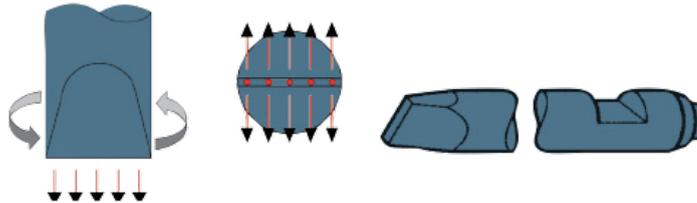
Secondary breaking in quarries, boulder breaking, concrete breaking, and slab breaking

Moil point



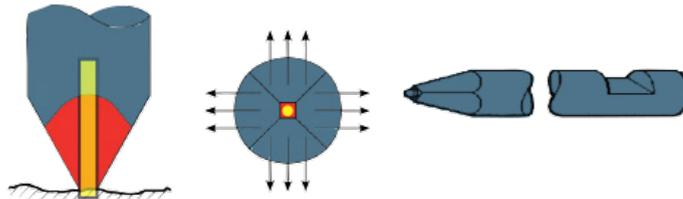
Multipurpose applications, including breaking of extra hard rock, hard rock, hard stone, and reinforced concrete, as well as excavation of bedrock

Wedge point



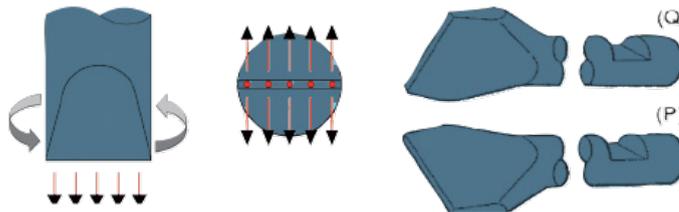
Concrete breaking, excavation of bedrock, operations on the face of slopes, excavation of ditches, etc.

Core rod  
(Ball Point Rod)



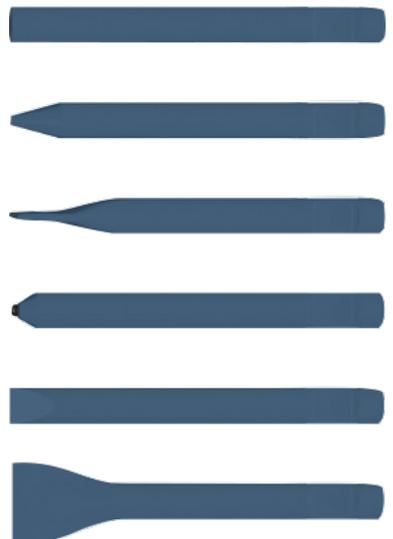
Breaking metal ores, as well as quartzite and other highly abrasive objects

Asphalt cutter /  
Spade rod



Asphalt cutter:  
Cutting of asphalt or soft material  
Spade rod:  
Breaking of asphalt in road building, knocking out of ladles, demolition of concrete or reinforced concrete

Material	Occurrence	Specification	Rod
Asphalt	Parking, Roads	soft structures	Wedge point / spade rod
Concrete	Thin floors, walls	Reinforced	Wedge point
		not reinforced	Moil point
	Thick floors, walls	Reinforced	Wedge point
		not reinforced	Moil point
	Foundations	Reinforced	Wedge point
not reinforced		Moil point	
Recycling		Flat rod	
Sedimentary rock (limestone, sandstone, greywacke, calcareous sediment)	Trenching, foundation work, primary quarry breaking	heavily fissured	Wedge point
		lightly fissured	Moil point
		monolithic	Moil point
	Breaking oversized		Wedge point
Crystalline rock (magma, greenstone, gabbro, granite etc.)	Trenching, foundation work, primary quarry breaking	heavily fissured	Wedge point
		lightly fissured	Flat rod
		monolithic	Flat rod
	Breaking oversized		Flat rod

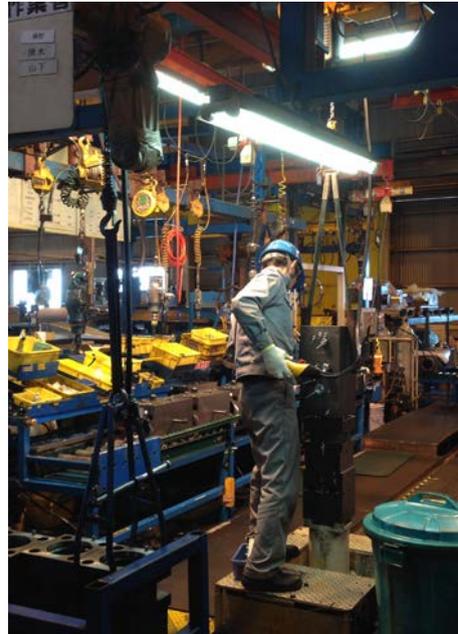


# TYPE OF RODS

## LOCAL SERVICE AND SUPPORT

FRD seeks firstly to supply a product of undoubted integrity. Then back this up with a support network of dedicated Distributors to ensure whatever support, wherever and whenever needed. The FRD-Distributor combination has been made unbeatable.

FRD Distributors have been selected for their professional competence, their market coverage, their dedication to quality and their willingness to work. They receive intense training on all machines and systems and every support that a committed manufacturer can give them. They actively exchange experience between each other to ensure their clients get the latest lessons from the market. They are a skilled and fast team of professionals.



## VALUE FOR MONEY

Buying FRD products is a smart investment. A reasonable price for top quality, long lifetime, low maintenance and low breakdown time products in the long term makes financially good sense.

Next steps? FRD Europe and its Distributors have a vast resource of information beyond what can be mentioned here.





WHERE EXPERIENCE COUNTS



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